

**INFORMATION DISCLOSURE CITATION**Form PTO-1449 (Modified)  
(Use several sheets if necessary)ATTY. DOCKET NO.  
06510-170CON2SERIAL NO.  
09/265,191

APPLICANT

Carson, et al.

FILING DATE  
03-10-99GROUP  
1635

JUL 28 2000

**U.S. PATENT DOCUMENTS**

Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
QW	AA 5,580,859	12-03-96	Carson et al.	514	44	
QW	AB 5,589,466	12-31-96	Carson et al.	514	44	
QW	AC 5,663,153	09-02-97	Hutcherson et al.	514	44	

**FOREIGN PATENT DOCUMENTS**

	Document Number	Date	Country	Class	Subclass	Translation	
						Yes	No
	AD EP 0468520 A2	01-29-92					
	AE WO 96/02555	02-01-96					
	AF WO 98/18810	05-07-98					

**OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)**

QW	AG	Branda et al. (1993). "Immune Stimulation by an Antisense Oligomer Complementary to the rev Gene of HIV-1" <i>Biochem. Pharmacol.</i> , Vol. 45: 2037-2043.
	AH	Carlberg (1993). "RXR-Independent Action of the Receptors for Thyroid hormone Retinoid Acid and Vitamin D on Inverted Palindromes" <i>Biochemist and Biophysical Res. Comm.</i> , Vol. 195(3): 1345-135.
	AI	Kataoka et al. (1992). "Antitumor Activity of Synthetic Oligonucleotides with Sequences form cDNA Encoding Proteins of <i>Mycobacterium bovis</i> BCG" <i>Jpn. J. Cancer Res.</i> , Vol. 83: 244-247.
	AJ	Kimura et al. (1994). "Binding of oligoguanylate to scavenger receptors is required for oligonucleotides to augment NK cell activity and induce IFN" <i>J. Biochem.</i> , Vol. 116: 991-994.
	AK	Krieg et al. (1989). "A Role or Endogenous Retroviral Sequences in the Regulation of Lymphocyte" <i>J. Immunol.</i> , Vol. 148(8): 2448-2451.
	AL	Krieg et al. (1995). "CpG Mofits in Bacterial DNA Trigger Direct B-cell Activation" <i>Nature</i> , Vol. 374: 546-549.
QW	AM	Kuramoto et al. (1992). "Oligonucleotide sequences required for natural killer cell activation" <i>Jpn. J. Cancer Res.</i> , Vol. 83: 1128-1131.

EXAMINER

DATE CONSIDERED

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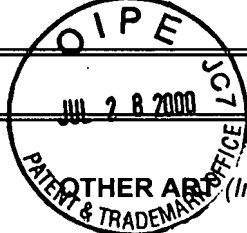
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QN	AN	Mojcik et al. (1993). "Administration of a Phosphorothioate Oligonucleotide antisense to Murine Endogenous Retroviral MCF env Causes Immune Effects in Vivo in a Sequence-Specific Manner" <i>Clin. Immuno. And Immunopathol.</i> , Vol. 67(2): 130-136.
	AO	Mulligan (1993). "The Basic Science of Gene Therapy" <i>Science</i> , Vol. 260: 926-932.
	AP	Ohi et al. (1990). "Construction and Replication of an Adeno-Associated Virus Expression Vector that Contain Human Beta-globin cDNA" <i>Gene</i> , Vol. 89(2): 279-282.
	AQ	Pisetsky et al. (1994). "Stimulation of Murine Lymphocyte Proliferation by a Phosphorothioate Oligonucleotide with Antisense Activity for herpes Simplex Virus" <i>Life Sci.</i> , Vol. 54(2): 101-107.
	AR	Pisetsky et al. (1995). "Immunological properties of bacterial DNA" <i>Ann. N.Y. Acad. Sci.</i> , Vol. 772: 152-163.
	AS	Pisetsky (1995). "The immunologic properties of DNA" <i>J. Immunol.</i> , Vol. 156(2): 421-423.
	AT	Raz et al. (1994). "Intradermal gene immunization: The possible role of DNA uptake in the induction of cellular immunity to viruses" <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 91: 9519-9523.
	AU	Romagnani (1994). "Lymphokine Production by Human T Cells in Disease States" <i>Annu. Rev. Immunol.</i> Vol. 12: 227-257.
	AV	Tonkunaga et al. (1992). "Synthetic Oligonucleotides with Particular Base Sequences from the cDNA Encoding Proteins of <i>Mycobacterium bovis</i> BCG Induce Interferons and Activate Natural Killer Cells" <i>Microbiol. Immunol.</i> , Vol. 36(1): 55-66.
	AW	Trinchieri et al. (1994). "The role of interleukin 12 in the immune response, disease, and therapy" <i>Immunology Today</i> , Vol. 15(10): 460-463.
	AX	Verma et al. (1997). "Gene therapy-promises, problems, and prospects" <i>Nature</i> , Vol. 389: 239-242.
	AY	Whalen et al. (1995). "DNA-mediated immunization to the hepatitis B surface antigen" <i>Ann. N.Y. Acad. Sci.</i> , Vol. 772: 64-76.
	AZ	Yamamoto et al. (1992). "Unique Palindromic Sequences in Synthetic Oligonucleotides are Required to Induce INF and Augment INF-Mediated Natural Killer Activity" <i>J. Immunol.</i> , Vol. 148: 4072-4076.
QN	BA	Yamamoto et al. (1994). "Ability of Oligonucleotides with Certain Palindromes to Induce Interferon Production and Augment Natural Killer Cell Activity is Associated with their Base Length" <i>Antisense Research and Development</i> , Vol. 4: 119-122.

EXAMINER

*Quang Nguyen*

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01/07/02

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OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

QN	BB	Yamamoto et al. (1994). "Synthetic oligonucleotides with certain Palindromes stimulate interferon production of human peripheral blood lymphocytes" <i>Jpn. Cancer Res.</i> Vol. 85: 775-779.
	BC	Yamamoto et al. (1994). "Lipofection of Synthetic Oligodeoxyribonucleotide having a palindromic sequence of AACGTT to murine splenocytes enhances interferon production and natural killer activity" <i>Microbiol. Immunol.</i> , Vol. 38: 831-836.
	BD	Yamamoto (1994). "Mode of Action of Oligonucleotide Fraction Extracted from Mycobacterium Bovis BCG" <i>Kekkaku</i> , Vol. 69(9): 571-574.
	BE	Yi et al. (1996). "IFN- $\gamma$ Promotes IL-6 and IgM Secretion in Response to CpG Motifs in Bacterial DNA and Oligodeoxynucleotides" <i>J. Immunol.</i> , Vol. 156(2): 558-564.
QN	BF	Zhao et al. (1996). "Effect of different chemically modified oligonucleotides on immune stimulation" <i>Biochem. Pharmacol.</i> , Vol. 51(2): 173-182.

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# FEE TRANSMITTAL

Note: Effective October 1, 1998,  
Patent fees are subject to annual inflation.

RECEIVED

AUG 15 2000

PATENT & TRADEMARK

Attorney Docket Number	6510-17 N2
First Named Inventor	Carson
Application Number	09/265,191
Filing Date	March 10, 1999
Group Art Unit	1635
Examiner Name	K. Hauda

## METHOD OF PAYMENT

- ☐ A Check Is Enclosed
- ☒ The Commissioner is hereby authorized to charge the following and any additional fees including fees required under 37 CFR 1.16 and 1.17 and credit any overpayments to:  
Deposit Account No. 50-0815.  
Deposit Account Name: Bozicevic, Field & Francis LLP

## FEE CALCULATION

### 1. FILING FEE

Large Fee Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description	Fee Due
101	690	201	345	Utility filing fee	\$00
102	310	206	155	Design filing fee	
104	480	207	240	Plant filing fee	
109	690	208	345	Reissue filing fee	
110	150	214	75	Provisional filing fee	
Subtotal (1)					\$

### 2. CLAIMS

No. of claims as filed or after amendment	Most claims previously paid	Extra claims	Fee from below	Fee Due
Total claims 92	25	67	9	\$603
Ind. claims 04	08	00		
Multiple Dependent claims				

Large Fee Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description
103	18	203	9	Claims in excess of 20
102	78	202	39	Independent claims in excess of 3
104	260	204	130	Multiple dependent claim
109	78	209	39	Reissue independent claims over original patent
110	18	210	9	Reissue claims in excess of and over original patent

Subtotal (2) \$603

### 3. ADDITIONAL FEES

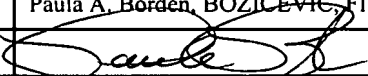
Large Fee Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description	Fee Due
105	130	205	65	Surcharge - late filing fee or oath	
139	130	139	130	Non-English specification	
115	110	215	55	Ext. for reply within first month	
117	870	217	435	Ext. for reply within third month	
128	1,850	228	925	Ext. for reply within fifth month	
120	300	220	150	Filing brief in support of appeal	
140	110	240	55	Petition to revive - unavoidable	
142	1,210	242	605	Utility issue fee (or reissue)	
123	50	123	50	Petitions related to prov. appl.	
146	690	246	345	Filing submission after final rejection (37 CFR 1.129(a))	
112	920*	112	920*	Requesting publication of SIR prior to Examiner action	
143	430	243	215	Design issue fee	
581	40	581	40	Recording patent assignment	
127	50	227	25	Surcharge - late provisional filing fee or cover sheet	
147	2,520	147	2,520	Filing a request for reexamination	
116	380	216	190	Ext. for reply within second month	
118	1,360	218	680	Ext. for reply within fourth month	
119	300	219	150	Notice of Appeal	
121	260	221	130	Request for oral hearing	
141	1,210	241	605	Petition to revive - unintentional	
122	130	122	130	Petitions to the Commissioner	
126	240	126	240	Submission of IDS	
149	690	249	345	For each additional invention to be examined (37 CFR 1.129(b))	
113	1840*	113	1840*	Requesting publication of SIR after Examiner action	
144	580	244	290	Plant issue fee	
Other fee (specify)					

\* Reduced by Basic Filing Fee Paid

SUBTOTAL (3) 00.00

TOTAL AMOUNT TO BE CHARGED (\$) 603.00

### SUBMITTED BY

Typed or Printed Name	Paula A. Borden, BOZICEVIC, FIELD & FRANCIS LLP	Reg. Number	42,344
Signature		Date	July 28, 2000
		Deposit Account	50-0815